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**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q80410

SHIN, Hyun-doo, et al.

Appln. No.: 10/795,991

Group Art Unit: 2676

Confirmation No.: 2250

Examiner: Gregory F. Cunningham

Filed: March 10, 2004

For: METHOD AND APPARATUS FOR IMAGE TEXTURE DESCRIBING

**SUBMISSION OF APPEAL BRIEF**

**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. A check for the statutory fee of \$500.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

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WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: March 23, 2006



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**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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**I. REAL PARTY IN INTEREST**

Based on the information supplied by the Appellants, and the best of Appellant's legal representative's knowledge, the real party in the interest is the assignee, SAMSUNG ELECTRONICS CO., LTD.

**II. RELATED APPEALS AND INTERFERENCES**

Appellants, as well as Appellants' assigns and legal representatives, are unaware of any appeals or interferences which will be directly affected by, or which directly affect or have a bearing on, the Board's decision in the pending case.

**III. STATUS OF CLAIMS**

Claims 36, 37, 39-53, and 55-66 are all the claims pending in the present application, have been finally rejected, and are the subject of this appeal. The pending claims are set forth in the Appendix.

**IV. STATUS OF AMENDMENTS**

No amendments have been made subsequent to the Final Office Action dated August 22,  
2005.

**V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

In an exemplary embodiment of the present invention, there is provided a computer readable medium having program codes executable by a computer to perform a method for describing texture features of an image (*see page 13, lines 1-7*), the method including: (a) generating a regularity indicator indicating regularity of the image (*Fig. 1B, operation 118*); (b) generating a direction indicator indicating direction of the image; (c) generating a scale indicator indicating scale of the texture element of the image (*Fig. 1B, operation 120; page 11, lines 15-24*); and (d) expressing a texture descriptor of the image (*Fig. 1B, operation 122; page 11, lines 25-28*) using the regularity indicator, the direction indicator and the scale indicator; wherein the regularity of the image is expressed as one of values, "irregular," "slightly irregular," "regular" and "highly regular." *See claim 36, for example. Independent claim 52 recites similar features.*

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

1. Claims 36 and 52 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Ort et al. (US Patent No. 5,659,626).
2. Claims 37, 39-51, 53, and 55-66 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ort in view of Murakawa (US Patent No. 6, 381,365).



## VII. ARGUMENT

- A. Ort does not anticipate claims 36 and 52. Specifically, Ort does not disclose or suggest at least, "wherein the regularity of the image is expressed as one of values, "irregular," "slightly irregular," "regular" and "highly regular," as recited in claims 36 and 52.

With respect to independent claims 36 and 52, Appellants submit that Ort does not disclose or suggest at least, "wherein the regularity of the image is expressed as one of values, 'irregular,' 'slightly irregular,' 'regular' and 'highly regular'." With respect to this particular feature, the Examiner cites the Abstract of Ort, which states that, 1) direction in spacing of ridges at regularly spaced pixels is determined, and 2) ridge angles in frequency at regularly spaced pixel are determined. However, nowhere does Ort disclose that a regularity indicator expresses that the regularity of an image is one of the claimed values set forth in claims 36 and 52.

Further, Appellants submit that indicating a regularity of an image is NOT satisfied by determining direction and spacing of ridges at regularly spaced pixel or by determining ridge angles and frequency at regularly spaced pixels. Therefore, at least based on the foregoing, Appellants submit that Ort does not anticipate independent claims 36 and 52.

With respect to claims 37, 39-51, 53, and 55-66, Appellants submit that these claims are patentable at least by virtue of their respective dependency from independent claims 36 and 52. Murakawa does not make up for the deficiencies of Ort.

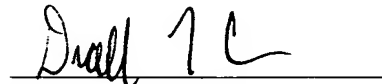
Conclusion

Appellants submit that, at least based on the foregoing, the present invention, as recited in each of the rejected claims, is patentably distinguishable over the applied references, either alone or in combination.

Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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**CLAIMS APPENDIX**

CLAIMS 36, 37, 39-53, and 55-66 ON APPEAL:

Claims 1-35: (canceled).

36. A computer readable medium having program codes executable by a computer to perform a method for describing texture features of an image, the method comprising:

- (a) generating a regularity indicator indicating regularity of the image;
- (b) generating a direction indicator indicating direction of the image;
- (c) generating a scale indicator indicating scale of the texture element of the image; and
- (d) expressing a texture descriptor of the image using the regularity indicator, the direction

indicator and the scale indicator;

wherein the regularity of the image is expressed as one of values, "irregular," "slightly irregular," "regular" and "highly regular."

37. The computer readable medium of claim 36, wherein the regularity of the image is expressed as one of a plurality of predetermined values.

38. (canceled).

39. The computer readable medium of claim 36, wherein the regularity indicator comprises a quantized integer.

40. The computer readable medium of claim 36, wherein the direction of the image is expressed as one of a plurality of predetermined values.

41. The computer readable medium of claim 36, wherein the direction of the image is expressed as one of values, "no directionality," "0 degree," "30 degree," "60 degree," "90 degree," "120 degree," and "150 degree."

42. The computer readable medium of claim 36, wherein the direction indicator comprises a quantized integer.

43. The computer readable medium of claim 36, wherein, the scale of the texture element is expressed as one of a plurality of predetermined values.

44. The computer readable medium of claim 36, wherein the scale of the texture element is expressed as one of values, "fine," "medium," "coarse," and "very coarse."

45. The computer readable medium of claim 36, wherein the the scale indicator comprises a quantized integer.

46. The computer readable medium of claim 36, wherein the texture descriptor of the image is expressed as a vector of the regular indicator, the direction indicator, and the scale indicator.

47. The computer readable medium of claim 36, wherein the direction indicator comprises a dominant direction of the image.

48. The computer readable medium of claim 47, wherein the scale indicator comprises a scale corresponding to the dominant direction of the image.

49. The computer readable medium of claim 48, wherein the direction indicator comprises a first direction indicator and a second direction indicator comprising a first dominant direction of the image and a second dominant direction of the image, respectively.

50. The computer readable medium of claim 49, wherein the scale indicator comprises a first scale indicator comprising a scale corresponding to the first dominant direction of the image and a

second scale indicator comprising a scale corresponding to the second dominant direction of the image.

51. The computer readable medium of claim 50, wherein the texture descriptor of the image comprises a vector of the regularity indicator, the first direction indicator, the second direction indicator, the first scale indicator, and the second scale indicator.

52. An apparatus for describing texture features of an image, comprising:

a generating unit to generate a regularity indicator indicating regularity of the image, a direction indicator indicating direction of the image, and a scale indicator indicating scale of a texture element of the image; and

an expressing unit to express a texture descriptor of the image using the regularity indicator, the direction indicator and the scale indicator;

wherein the regularity indicator expresses the regularity of the image as one of values, "irregular," "slightly irregular," "regular" and "highly regular."

53. The apparatus of claim 52, wherein the regularity indicator expresses the regularity of the image as one of a plurality of predetermined values.

54. (canceled).

55. The apparatus of claim 52, wherein the regularity indicator comprises a quantized integer.

56. The apparatus of claim 52, wherein the direction indicator expresses the direction of the image as one of a plurality of predetermined values.

57. The apparatus of claim 52, wherein the direction indicator expresses the direction of the image as one of values, "no directionality," "0 degree," "30 degree," "60 degree," "90 degree," "120 degree," and "150 degree."

58. The apparatus of claim 52, wherein the direction indicator comprises a quantized integer.

59. The apparatus of claim 52, wherein the scale indicator expresses the scale as one of a plurality of predetermined values.

60. The apparatus of claim 52, wherein the scale indicator expresses the scale as one of values, "fine," "medium," "coarse," and "very coarse."

61. The apparatus of claim 52, wherein the scale indicator comprises a quantized integer.

62. The apparatus of claim 52, wherein the texture descriptor of the image is expressed as a vector of the regularity indicator, the direction indicator, and the scale indicator.

63. The apparatus of claim 52, wherein the direction indicator comprises a dominant direction of the image.

64. The apparatus of claim 52, wherein the scale indicator comprises a scale corresponding to the dominant direction of the image.

65. The apparatus of claim 52, wherein the direction indicator comprises a first direction indicator and a second direction indicator comprising a first dominant direction of the image and a second dominant direction of the image, respectively.

66. The method of claim 65, wherein the scale indicator comprises a first scale indicator comprising a scale corresponding to the first dominant direction of the image and a second scale indicator comprising a scale corresponding to the second dominant direction of the image.

**EVIDENCE APPENDIX:**

NONE.

*APPEAL BRIEF UNDER 37 C.F.R. §41.37*  
*U. S. Application No. 10/795,991*

*ATTORNEY DOCKET NO. Q80410*

**RELATED PROCEEDINGS APPENDIX**

NONE.